Sir:

This is a supplemental response to the April 19, 2006 Office Action in the above-identified application, as filed to document the July 6, 2006 teleconference between the undersigned attorney and the Examiner Robert A. Wax, and to furnish the further information requested in such teleconference.

Examiner Wax contacted the undersigned attorney on July 6, 2006 and requested substantiation of the statement made at page 17 of the applicants' response filed June 19, 2006 in the application, that small heat shock proteins would be present in a cellular sample of the type described in Lubman U.S. Patent Publication No. 2002/0098595 ("Lubman"), at concentrations <<0.1 wt.%.

Set out below as Table 1 hereof is a listing of cellular components of *Saccharomyces cerevisiae*, as a representative cellular composition taken from Table 8.3 of Schulze, U. (1995), *Anaerobic physiology of Saccharomyces cerevisiae*. Ph.D. thesis, Technical University of Denmark.

Table 1. Cellular composition of S. cerevisiae from a glucose limited anaerobic continuous culture (adopted from Schulze, 1995).

D=0.1	Cellular content %(w/w)
Protein	45.0
Glycogen	8.4
Trehalose	0.8
Mannan	13.1
Other carbohydrates	18.4
RNA	6.3
DNA	0.4
Free amino acids	1.1
Lipid	2.9
Ash	5.0
Sum	101.4

As shown in such Table 1, the protein content of the cellular composition is 45 wt. %. This value therefore has been utilized for purposes of calculation, to make the relevant determination based on the information furnished in Lubman.

Set out below is a reproduction of FIGURE 3 of Lubman showing protein fractions recovered from a cell lysate, for which the specific proteins in the respective fractions are identified in Table 1 at page 12 of Lubman.

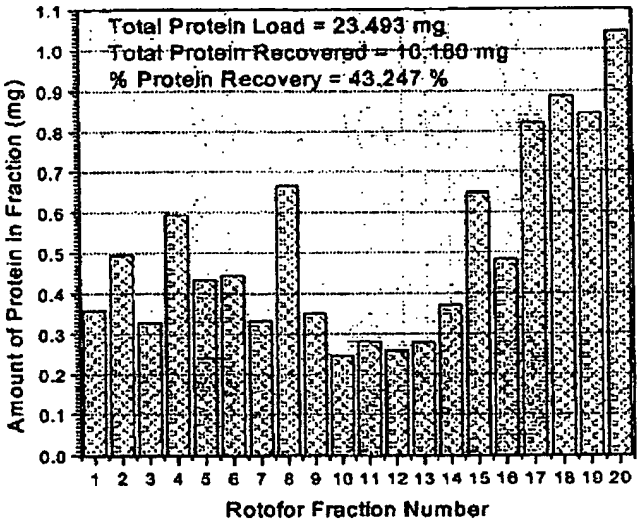


FIG. 3

Examiner Rooke in the April 19, 2006 Office Action rejected claims 1 and 15 over Lubman, citing paragraph [0137] at page 15 of Lubman for its teaching of heat shock proteins.

The specific heat shock protein referenced in Lubman's paragraph [0137] is heat shock protein HS27.

Accordingly, in FIGURE 3 of Lubman, protein fraction 11 is relevant, since this fraction contains heat shock protein HS27 ("Heat Shock 27"). In addition to HS27, protein fraction 11 contains five other protein species:

- (L32610) ribonucleoprotein;
- (X59656) CRKL;
- EXOSTOSIN-L;
- FOLLISTATIN 1 AND 2 PRECURSOR; and
- cargo selection protein TIP47.

Thus, in protein fraction 11 of Lubman, heat shock protein HS27 is one of six protein species that are present in the fraction.

Referring again to FIGURE 3, the amount of protein in fraction 11 is seen to be 0.28 mg, out of a total protein load of 23.493 mg in the cellular sample.

The percentage of fraction 11 proteins in the cellular sample then may be calculated as:

% constituted by fraction 11 in the cellular sample =

$$\frac{\text{0.28 mg proteins in fraction 11}}{\text{(23.493 mg protein in sample) x (1 mg of sample/0.45 mg protein in sample)]}} \times 100\%$$

= 0.5 %

Now, since HS27 is one of six protein species that are present in fraction 11, HS27 constitutes only a fractional part of fraction 11. As one-sixth (1/6) of the proteins in fraction 11, HS27 has a concentration of 0.5% x (1/6) = 0.083%, which is consistent with the statement made at page 17 of applicants' June 19, 2006 response.

It again is pointed out that all of the proteins present in the cellular sample of Lubman are intrinsically present in the cellular sample, as endogenous protein. No additional heat shock protein is added to the sample by Lubman, and there is accordingly no awareness or suggestion in Lubman that addition of heat shock protein would in any way be useful or efficacious to improve characterization of the sample composition.

Lubman therefore wholly lacks any derivative basis for applicants' claimed sample composition containing "added sHSP" (claim 1), or claimed method (claim 15, reciting, *inter alia*, "using the composition of claim 1"). Lubman, by contrast, doesn't add any heat shock protein – Lubman only characterizes a cellular sample containing endogenous proteins.

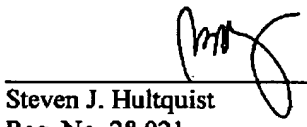
Lubman thus cannot anticipate applicants' invention as recited in claims 1 and 15.

Based on the foregoing, the application is now in form and condition for allowance.

Issue of a Notice of Allowance is therefore merited and respectfully requested.

Applicants appreciate the courtesy extended by Examiner Wax in his telephonic interaction with the undersigned attorney on July 6, 2006.

Respectfully submitted,



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